**Figure 2, Table S1: Soil Volumetric Water Content Analysis**

**Ring mean values for soil volumetric water content are presented in the files:**

‘2004\_soil\_moisture\_ringmeans.csv’

‘2005\_soil\_moisture\_ringmeans.csv’

‘2006\_soil\_moisture\_ringmeans.csv’

‘2007\_soil\_moisture\_ringmeans.csv’

‘2008\_soil\_moisture\_ringmeans.csv’

‘2009\_soil\_moisture\_ringmeans.csv’

‘2010\_soil\_moisture\_ringmeans.csv’

‘2011\_soil\_moisture\_ringmeans.csv’

Within these files, the column ‘true\_ten’ is the calibrated soil moisture data for the 5-15 cm soil depth category for that date, and so on through the column ‘true\_seventy’, which is the calibrated soil moisture data for the 65-75 cm soil depth category for that date. The column ‘start\_ten’ is the calibrated soil moisture data for the 5-15 cm soil depth category for the first measurement date of the season, and so on through the column ‘start\_seventy’, which is the calibrated soil moisture value for the first measurement date of the season. These starting values were used as covariates in the analysis of covariance (ANCOVA).

**Ring mean soil moisture data are analyzed via ANCOVA in the SAS files:**

‘2004\_Soil\_Moisture\_ANCOVA.sas’

‘2005\_Soil\_Moisture\_ANCOVA.sas’

‘2006\_Soil\_Moisture\_ANCOVA.sas’

‘2007\_Soil\_Moisture\_ANCOVA.sas’

‘2008\_Soil\_Moisture\_ANCOVA.sas’

‘2009\_Soil\_Moisture\_ANCOVA.sas’

‘2010\_Soil\_Moisture\_ANCOVA.sas’

‘2011\_Soil\_Moisture\_ANCOVA.sas’

Model-corrected treatment means (lsmeans) for ambient CO2 treatment are plotted as the response surface in Figure 2A-H, while the color of the surface represents the % effect of elevated [CO2] on soil moisture. ANCOVA test results are presented in Table S1.